

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An electro stimulation system for providing signals to a subject including:

at least one electrical power supply connected to electrical current control circuit such that electrical current supplied to the subject is controlled;

at least three connection probes electrically connected to the subject and spatially arranged such that any electrical current flowing between the respective connection probes establishes electrical current flows through differing paths through the subject;

a first switching device for intermittently connecting the an output of an the at least one electrical power supply to one or more of the connection probes electrically connected to the subject thus forming thereby causing said one or more connection probes to become active probes;

a second switching device for intermittently connecting one or more of the connection probes electrically connected to the subject to form an at least one electrical current return path for current supplied by the electrical power supply thus forming thereby causing said one or more connection probes to become return path probes; and

switching control devices connected to the first and second switching devices;

wherein the intermittent connection of the output of an electrical power supply and the intermittent formation of electrical current return paths vary during a treatment such that a single connection probe can act as an active probe, or a return path probe or remain disconnected at different times, the selection of a probe as active, return path or disconnected resulting from the activation of the switching devices, and wherein the switching devices act independently of each

other and the selection also causing the establishment of electrical currents passing through different paths through the subject during a treatment.

2. (Canceled)

3. (Previously Presented) The electro stimulation system according to claim 1 wherein the first and second switching devices are multiplexing devices each connected to a multiplexing control device.

4. (Currently Amended) A method of providing electro simulation to a subject wherein a plurality of at least three spatially arranged electro stimulation probes are electrically connected at one end to the subject, said the spatial arrangement of the probes causing any electrical current flowing between the probes to flow through different paths through the subject, the probes being electrically switchable to connect another end of the each respective probe to at least either an electrical power supply for the supply of controlled electrical current or a current return path, the method including the steps of:

(a) selecting one or more of the probes for connection to at least one electrical power supply thereby causing said one or more probes to become active probes;

(b) selecting one or more of the probes for connection to an at least one electrical current return path thereby causing said one or more probes to become return path probes;

(c) selecting none or a number of probes to remain disconnected from the at least one electrical power supply and the at least one electrical current return path;

(ed) connecting said one or more active probes to the at least one electrical power supply and said one or more return path probes to an the at least one electrical current return path thus causing an electrical current to flow between said active and return probes; and

(d)e) altering the selection of active and return probes and switching the probe connections to accord with the altered section selection; and

(ef) repeating steps (ed) and (de) until completion of the electro stimulation treatment during which probe selections occur that cause electrical currents to flow through different paths through the subject.

5. (Previously Presented) The method of providing electro stimulation to a subject according to claim 4 wherein the selection of active and return probes is varied during a single session of electro stimulation.

6. (Currently Amended) The method of providing electro stimulation to a subject according to claim 4 wherein only a single probe is selected as an active probe at any one time whilst all other probes are selected as return path probes.

7. (Currently Amended) The method of providing electro stimulation to a subject according to claim 4 wherein only a single probe is selected as a return path probe whilst all other probes are selected as active probes.

8. (Currently Amended) The method of providing electro stimulation to a subject according to claim 4 wherein one or more probes are selected as active probes, and one or more probes are selected as return path probes and no probes remain disconnected.

9. (Currently Amended) The method of providing electro stimulation to a subject according to claim 4 wherein the selection and connection of active and return path probes in method steps (ed) and (de) are chosen such that during any period of substantially zero current flow in one area, current flow is established in another area of the subject.

10. (Previously Presented) The method of providing electro stimulation to a subject according to any one of claims 4 to 9 wherein the method is effected with an apparatus consisting of only one electrical power supply that is used for the purpose of providing electro stimulation signals to the subject.

11. (Currently Amended) The method of providing electro stimulation to a subject according to claim 4 wherein the step of attaching a plurality of the at least three electro stimulation probes in electrical connection with the subject is effected by the inclusion of a predetermined probe arrangement for a particular part of the subject in a piece of material that is placed over the area requiring electro stimulation such that the probes are placed in connection with the subject at the approximate required probe locations.

12. (Previously Presented) The method of providing electro stimulation to a subject according to claim 11 wherein the piece of material including a predetermined probe arrangement is shaped substantially to conform with the shape of the subject's face.

13. (Currently Amended) A controlled electrical signal for supplying electrical currents to a subject, said electrical current flowing through an area of the subject by connection of same with at least one three connection probes with each probe operable as an active, and return path or disconnected probe wherein,

an electrical power supply is connected to the at least one connection probe thus forming an active probe;

at least one connection probe is connected to an electrical current return path thus forming a current return path probe;

none or more probes remain disconnected from the electrical power supply and the current return path;

a first electrical resistance is connected in parallel with the active and return path probes; and

the junction between the return path probe and the first resistance is connected to a ground reference through a controllable variable conductance network including a conductance path formed by a collector-emitter path through

a transistor in series connection with a second electrical resistance such that the voltage at the junction of the emitter and the second resistance varies proportionally with the electrical current flowing through the area of the subject between the active and return path probes.

14. (Currently Amended) The controlled electrical signal supply according to claim 13 wherein the first electrical resistance is selected such that it is significantly greater than the expected electrical resistance between an active and return path probe in the area of the subject.

15. (Canceled)

16. (Previously Presented) The controlled electrical signal supply according to claim 13 wherein the junction between the emitter and the second electrical resistance is connected to a control signal network to enable the generation of a control signal for the base input of the transistor.

17. (Currently Amended) The controlled electrical signal supply according to claim 16 wherein the control signal network includes an operational amplifier receiving just one input from the conductance network connected to the junction of the emitter and the second resistance and a second input from a digital to an analogue signal source converter.

18. (Previously Presented) The controlled electrical signal supply according to claim 17 wherein the operational amplifier is configured as a differential amplifier with the input from the digital to analogue converter connected to the non-inverting input and the output from the conductance network thus providing a voltage proportional to the electrical current flowing through the area under treatment connected to the inverting input of the differential amplifier.

19. (Previously Presented) The controlled electrical signal supply according to claim 18 wherein the output voltage of the digital to analogue converter is controlled by a digital output of a microprocessor programmed to

provide a varying digital to analogue converter output voltage thus causing a similarly varying electrical current flow through the area of the subject.

20. (Canceled)
21. (New) The electro stimulation system according to claim 1, wherein the first switching device and the second switching device comprise a single unit.
22. (New) The controlled electrical signal supply according to claim 17, wherein the analogue signal source comprises a digital to analogue converter.